URBAN STANDARD SPECIFICATIONS for PUBLIC IMPROVEMENT MANUAL SEE GENERAL NOTES ON SHEET 2. PACKER OR COMMERCIAL MATERIAL -SEALING MATERIAL -SEALING MATERIAL CEMENT (-NEAT CEMENT (PLUG-Œ SEALED WEL SEALED WELL ○ MINIMUM THICKNESS OF 20 FEET. PLACE A MINIMUM OF 10 FEET ABOVE AND BELOW BOTTOM OF CASING. GROUND LINE MORE THAN ONE PRODUCING AQUIFER -NEAT ٦ GROUND LINE 111=111=111= ARTESIAN WELLS 6'NEAT CEMENT SEALING MATERIAL CONFINING LAYER MATERIAL T -TOP OF CASING <u>A'a'uir'er'</u> 6'NEAT CEMENT CONFINING -BÓTTÓM L--OF CASING -– AQUIFER , - AQUIFER 1 BOTTOM OF CASING EXISTING WELL EXISTING WELL GROUND LINE GROUND LINE OPEN HOLE -OPEN HOL WELLS LESS THAN 18 INCHES IN DIAMETER r cap, Sealing material AND ALL WELLS IN BED ROCK CASING CEMENT -I' NEAT GROUND LINE SEALED WELL MATERIAL SEALING SEALING IO, MIN. MATERIAL SEALED WELL WELLS GREATER THAN 18" IN DIAMETER AND LESS THAN 100' DEEP IN SOIL PRODUCING AQUIFER CLASS 2 WELLS GROUND LINE MATERIAL STATIC WATER_ LEVEL SEALING MATERIAL WATER LEVEL 6' NEAT REMOVE 4' — OF EXISTING CEMENT -AQUIFER CASING 6'' MIN. CASING EXISTING WELL GROUND LINE ONE GROUND LINE EXISTING WELL BOTTOM' 1 OPEN_HOL DETAILS FOR SEALING WATER WELLS REV. DATE ΒY 2010.4 FIGURE: 01-01-98 DATE: OF 2 SHEET

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URBAN STANDARD SPECIFICATIONS for PUBLIC IMPROVEMENT
                GENERAL NOTES:
                ANY WELL NO LONGER IN USE SHALL BE SEALED, DETAILS SHOWN
                HEREON ARE INTENDED TO DEPICT THE VARIOUS STANDARD METHODS
                USED FOR SEALING WATER WELLS, ALL MATERIALS AND METHODS
                USED SHALL BE IN ACCORDANCE WITH IOWA CODE SECTION 567.
                CHAPTER 39, REQUIREMENTS FOR PLUGGING ABANDONED WELLS.
                WELLS SHALL BE SEALED BY A CERTIFIED WELL CONTRACTOR.
                APPROVED SEALING MATERIALS ARE: I) NEAT CEMENT (14 LBS.
                CEMENT PER IGALLON OF WATER); 2) GRADED BENTONITE, BEN-
                TONITE PELLETS OR BENTONITE GROUT; 3) SAND CEMENT GROUT
                (ISACK OF CEMENT / EQUAL VOLUME MASONRY SAND / NOT MORE
                THAN 6 GALLONS WATER): 4) CONCRETE.
                APPROVED FILL MATERIALS ARE: I) SAND, 2) PEA GRAVEL, 3) CLASS
                A. B OR C GRANULAR SURFACING MATERIAL, 4) AGRICULTURE LIME
                ALL MATERIALS SHALL BE FREE OF FOREIGN MATTER AND ANY TOXIC
                RESIDUE.
                REGARDLESS OF THE MATERIAL USED IN THE PROCESS, THE SEALING
                (FILLING) MATERIAL SHOULD BE INTRODUCED AT THE BOTTOM OF THE
                WELL, OR AT THE INTERVAL TO BE SEALED (OR FILLED) AND PLACED
                PROGRESSIVELY UPWARD TO THE TOP OF THE WELL. ALL SEALING
                MATERIALS SHALL BE PLACED BY THE USE OF GROUT PIPE, TREMIE
                PIPE. CEMENT BUCKET OR DUMP BAILER, IN SUCH A WAY AS TO
                AVOID SEGREGATION OR DILUTION OF THE SEALING MATERIALS.
                BENTONITE PELLETS OR GRADED BENTONITE MAY BE ADDED AS
                SEALING MATERIAL BY POURING IN PLACE AND AGITATING TO AVOID
                BRIDGING.
                RECOMMENDED PLUGGING PROCEDURES: THE ENTIRE WELL BORE
                MUST BE FILLED WITH ONE OR A COMBINATION OF THE ABOVE
                MATERIALS, ALL OBSTRUCTIONS MUST BE REMOVED FROM THE WELL.
                FOR ALL (DEEP) WELLS, NEAT CEMENT SHALL BE PLACED FROM 10
                FEET BELOW THE BOTTOM OF THE CASING TO 10 FEET ABOVE THE
                BOTTOM OF THE CASING OR TO THE STATIC WATER LEVEL, WHICHEVER
                IS HIGHER, FOR WELLS COMPLETED IN MULTIPLE AQUIFERS, THIS SAME
                PROCEDURE SHALL BE RE-USED THROUGHOUT SUBSEQUENT AQUIFERS.
                THE UPPER PORTION OF THE WELL CASING SHALL BE CUT OFF AT LEAST
                4 FEET BELOW GROUND OR CONSTRUCTION LEVEL, THE UPPER 6 FEET
                OF THE REMAINING CASING SHALL BE PLUGGED WITH NEAT CEMENT.
                PRICE BID FOR "SEALING WELLS" SHALL BE CONSIDERED FULL COM-
                PENSATION FOR FURNISHING ALL MATERIAL AND WORK NECESSARY TO
                COMPLETELY SEAL WELLS AS DETAILED HEREON AS WELL AS NOTED
                ON DETAIL PROJECT PLANS OR AS DIRECTED BY THE ENGINEER.
REV.
      DATE
                  BY
                               DETAILS FOR SEALING WATER WELLS
                                                                                  FIGURE: 2010.4
DATE: 01-01-98
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